

Launch Mission Execution Forecast

Mission: SpaceX Falcon 9 Starlink-L9 Issued: 21 Jun 2020 / 0930L (1330Z)

Valid: 23 Jun 2020 / 1717 – 1727L (2117 – 2127Z)



Forecast Discussion: The Atlantic ridge will re-establish itself over central Florida by tomorrow and will be the primary factor in the upcoming week's weather pattern. The ridge axis will be located just to the south of the Spaceport by Tuesday, causing a light southwest flow in the morning. By the afternoon, winds will shift to the southeast as the sea breeze pushes through. Because of the prevailing offshore flow and fairly high instability, scattered showers and thunderstorms will form along the sea breeze front as it slowly pushes inland. Much of the shower and storm activity will be likely be inland by late afternoon, but westerly winds in the mid and upper levels will cause some of them and their associated anvils to move back towards the east coast during the early evening. Because of this, the main concerns for the launch window will be the Cumulus Cloud Rule, the Anvil Cloud Rule, and the Lightning rule.

For the backup window on Wednesday, the pattern looks very similar, but the ridge axis will drift slightly farther south and offshore winds will be a bit stronger. This will likely keep the sea breeze and its associated convection closer to the coast. Therefore, the concerns will be the same as on Tuesday, with a slightly higher probability of violation.

	Probability of Violating Weather Constraints								
Day	40% Primary Concerns: Cumulus Cloud Rule, Anvil Cloud Rule, Lightning Rule								
ch	Weather Conditions							Additional Risk Criteria	
aunch	Weather/Visibility:		Iso T-Storms /7 mi.	Туре	Clouds Coverage	Base (ft)	Tops (ft)	Upper-Level Wind Shear:	Low
Ľ	Temp/Humidity:		82°F / 75%	Cumulus	Scattered	3,000	12,000	Booster Recovery Weather:	Low
	Liftoff Winds (200') : 160° 10 - 15 mph		160° 10 - 15 mph	Cirrostratus	Broken	25,000	28,000	Solar Activity:	Low
	Probability of Violating Weather Constraints								
Delay	60% Primary Concerns: Cumulus Cloud Rule, Anvil Cloud Rule, Lightning Rule								
	Weather Conditions							Additional Risk Criteria	
24-Hour	Weather/Visibility:		Sct T-Storms / 7 mi.	Туре	Clouds Coverage	Base (ft)	Tops (ft)	Upper-Level Wind Shear:	Low
24	Temp/Humidity:		84°F / 70%	Cumulus	Scattered	3,000	15,000	Booster Recovery Weather:	Moderate
	Liftoff Winds	(200'):	170° 10 - 15 mph	Cirrostratus	Broken	25,000	28,000	Solar Activity:	Low

Note: The Probability of Violation (POV) is the chance that a Lightning Launch Commit Criteria (LLCC) or certain user constraints (surface winds, precipitation, and temperatures, etc.) will be violated during the launch window. It does not take into account upper-level wind shear, booster recovery weather, and solar activity.

Next Forecast Will Be Issued

22 Jun 2020